

[A] corresponds to the sequence $(LS)_m$ -HL-K1- $(K2)_n$ [$(LS)_m$ -HL-K1- $(K2)_n$ - $(K3)_o$ - $(K4)_p$]

wherein [(the numbering of the following amino acids refers to the HF MSP sequences as reported in Fig. 1 and 2, respectively)]:

LS comprises [is an] amino acid [sequence corresponding to] residues [1-3 of HGF or] 1-18 of MSP (SEQ ID NO:20);

HL comprises [is] an amino acid sequence starting between residues 32-70 of the HGF α chain (SEQ ID NO:18) and ending between residues 96-127 of the identical chain[;] or [it is] an amino acid sequence starting between residues 19-56 of the MSP α chain (SEQ ID NO:20) and ending between residues 78-109 of the identical chain;

K1 comprises [is] an amino acid sequence starting between residues 97-128 of the HGF α chain (SEQ ID NO:18) and ending between residues 201-205 of the identical chain[;] or [it is] an amino acid sequence starting between residues 79-110 of the MSP α chain (SEQ ID NO:20) and ending between residues 186-190 of the identical chain;

K2 comprises [is] an amino acid sequence starting between residues 202-206 of HGF α chain (SEQ ID NO:18) and ending between residues 283-299 of the identical chain[;] or [it is] an amino acid sequence starting between residues 187-191 of MSP α chain (SEQ ID NO:20) and ending between residues 268-282 of the identical chain;

[K3 is an amino acid sequence starting between residues 284-300 of HGF α chain and ending between residues 378-385 of the identical chain; or it is an amino acid sequence starting between residues 269-283 of MSP α chain and ending between residues 361-369 of the identical chain;

K4 is an amino acid sequence starting between residues 379-386 of HGF α chain and ending between residues 464-487 of the identical chain; or it is an amino acid sequence starting between residues 362-370 of MSP α chain and ending between residues 448-481 of the identical chain;]

m[,] and n[, o, p] are 0 or 1;

[the sum n + o + p is an integer from 1 to 3 or 0, with the proviso that n \geq o \geq p;]

B is the sequence [(X)_q Y]_r, wherein X = Gly and Y = Ser, or Cys, or Met, or Ala;

q is an integer from 2 to 8;

r is an integer from 1 to 9;

[C] corresponds to the sequence HL-K1-(K2)_s [HL-K1-(K2)_s- (K3)_t-(K4)_u]

wherein HL, K1, and K2 [K1-K4] are as defined above,

s is [,t,u are] 0 or 1; [the sum s + t + u is an integer from 1 to 3 or 0, with the proviso that s \geq t \geq u;]

D is the sequence W-Z, wherein W is a conventional proteolytic site, Z is any tag sequence useful for the purification and detection of the protein; and y is 0 or 1.

Claim 2. (Twice Amended) [Recombinant proteins] The recombinant protein according to claim 1, [in which the] wherein:

[the] HL comprises [domain is a sequence of HGF α chain ranging from] amino acids 32 to 127 of the HGF α chain (SEQ ID NO:18), or [a sequence of MPS α chain ranging from] amino acids 19 to 98 of the MPS α chain (SEQ ID NO:20);

[the] K1 comprises [domain is a sequence of HGF α chain ranging from] amino acids 128 to 203 of the HGF α chain (SEQ ID NO:18), or [a sequence of MPS α chain ranging from] amino acids 99 to 188 of the MPS α chain (SEQ ID NO:20); and

[the] K2 comprises [domain is a sequence of HGF α chain ranging from] amino acids 204 to 294 of the HGF α chain (SEQ ID NO:18), or [a sequence of MPS α chain (SEQ ID NO:20) ranging from] amino acids 189 to 274 of the MPS α chain (SEQ ID NO:20) [; the K3 domain is a sequence of HGF α chain ranging from amino acids 286 to 383, or a sequence of MPS α chain ranging from amino acids 275 to 367; the K4 domain is a sequence of HGF α chain ranging from amino

acids 384 to 487, or a sequence of MPS α chain ranging from amino acids 368 to 477].

Claim 3. (Twice Amended) [Recombinant proteins] The recombinant protein according to claim 1 of formula (II):

$LS_{MSP}-HL_{MSP}-K1_{MSP}-K2_{MSP}-L-HL_{HGF}-K1_{HGF}-K2_{HGF}-D$ (II)

wherein [in which] LS_{MSP} [is the sequence] comprises amino acids 1-18 of MSP (SEQ ID NO:20), HL_{MSP} [is the sequence] comprises amino acids 19-56 of MSP (SEQ ID NO:20), $K1_{MSP}$ [is the sequence] comprises amino acids 99-188 of MSP (SEQ ID NO:20), $K2_{MSP}$ [is the sequence] comprises amino acids 189-274 of MSP, HL_{HGF} [is the sequence] comprises amino acids 32-127 of HGF, $K1_{HGF}$ [is the sequence] comprises amino acids 128-203 of HGF, $K2_{HGF}$ [is the sequence] comprises amino acids 204-294 of HGF, L comprises [is] the sequence $(Gly_4Ser)_3$, D comprises [is] the sequence Asp₄-His₆.

Claim 10. (Twice Amended) [Recombinant proteins of claim 1 for use as] A therapeutic [agents] agent comprising the recombinant protein of claim 1.

Claim 13. (Twice Amended) [Pharmaceutical compositions containing] A pharmaceutical composition comprising an effective

Serial No. 09/600,991

amount of the recombinant [proteins] protein of claim 1 in combination with pharmacologically acceptable excipients.